

UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

CALIFORNIA FOREST AND RANGE EXPERIMENT STATION

ADDRESS REPLY TO  
DIRECTOR  
AND REFER TOUNIVERSITY OF CALIFORNIA  
330 GIANNINI HALL  
BERKELEY, CALIFORNIARS  
M-1  
ME  
Growth  
Selection Stands

February 27, 1939

Definition of Variables

Following are the definitions of variables used in the growth and loss alignment charts for selection stands. The definitions are segregated by charts.

## GROWTH OF STAND 11.6 INCHES DBH AND OVER.

A. Volume per acre, board feet. The volume per acre, by Scribner Rule, of all trees that were 11.6 inches DBH and over at the time of cutting. All species included.

B. Percent of volume in sugar pine and white fir. The volume of sugar pine and white fir in trees 11.6 inches DBH and over, expressed as a percentage of the volume of all species, in trees 11.6 inches and larger.

C. Average volume per tree, board feet. Volume of all trees 11.6 inches DBH and over, divided by the number of trees 11.6 inches DBH and over. All species included.

D. Percent of volume in tree class 1. Volume of trees 11.6 inches DBH and over that are in Region 5 tree class 1, expressed as a percentage of volume in all trees 11.6 inches DBH and over. All species included.

G. Site index, feet. The average total height, in feet, of mature dominant (Class 3) trees in the stand. Reference is made to CE&RES Sta. Chart dated 1933 and designated R-CAL, M-1, Site index,

X. <sup>Average</sup> mean annual growth per acre, board feet. Average annual growth per acre in board feet, Scribner Rule, of all trees that were 11.6 inches DBH and over at the time of cutting. Twenty year period.



TREES GROWING INTO THE STAND 11.6 INCHES AND OVER.

A. Number of poles 3.6 to 11.5 inches DBH, per acre. Number of trees per acre, from 3.6 to 11.5 inches DBH, inclusive, at the time of cutting. All species.

B. Percent of poles in sugar pine and white fir. Number of sugar pine and white fir trees 3.6 to 11.5 inches DBH expressed as a percentage of the number of trees of all species 3.6 to 11.5 inches DBH.

C. Percent of poles in tree class 1. Number of trees 3.6 to 11.5 inches DBH that are in Region 5 tree class 1, expressed as a percentage of all trees 3.6 to 11.5 inches DBH.

D. Average diameter of pole stand, inches. Average diameter of all trees 3.6 to 11.5 inches DBH, by basal area method. It will be sufficiently accurate to use the average of the diameters in application of the chart.

G. Site index, feet. The average total height, in feet, of mature dominant (Class 3) trees in the stand. Reference is made to CF&RES Sta. Chart dated 1933 and designated R-CAL, M-1, Site index.

X. Average annual growth per acre, board feet. Volume by Scribner Rule, of the poles at the time they reach 11.6 inches DBH, plus subsequent growth, during a 20-year period, converted to an acre-year basis.

LOSS IN STAND 11.6 INCHES DBH AND OVER.

A. Volume per acre, board feet. The volume per acre, by Scribner Rule, of all trees that were 11.6 inches DBH and over at the time of cutting. All species.

C. Percent of volume in white fir. Volume of white fir in trees 11.6 inches DBH and over expressed as a percentage of the volume of all species, trees 11.6 inches DBH and over.

D. Percent of volume in tree classes 4, 5, 6, and 7. Volume of trees 11.6 inches DBH and over that are in Region 5 tree classes 4, 5, 6, and 7, expressed as a percentage of the volume in all trees 11.6 inches DBH and over.

E. Site index, feet. The average total height, in feet, of mature dominant (Class 3), trees in the stand.

X. <sup>Average</sup> mean annual loss per acre, board feet. Volume by Scribner Rule, of all trees 11.6 inches DBH and over, that died during a 20-year period. Converted to an acre-year basis.

In computing values for these variables, to be applied to the charts, it is necessary to work with a total value for all plots. That is, suppose 50 plots from a common site or type are to be used in making a prediction. The volume, number of trees, etc., from the 50 plots should be totaled. The values for the variables must be computed from these totals and then converted to an acre basis where necessary. Errors will result if each plot is converted to an acre basis and the variables are derived from these converted values,



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NUMBER OF POLES  
3.6 TO 11.5 IN. DBH  
PER ACRE

PERCENT OF POLES  
IN SP & WF

PERCENT OF POLES  
IN TREE CLASS I

MEAN ANNUAL  
GROWTH PER ACRE  
BOARD FEET

AVERAGE DIAMETER  
OF POLE STAND  
INCHES

SITE INDEX  
FEET

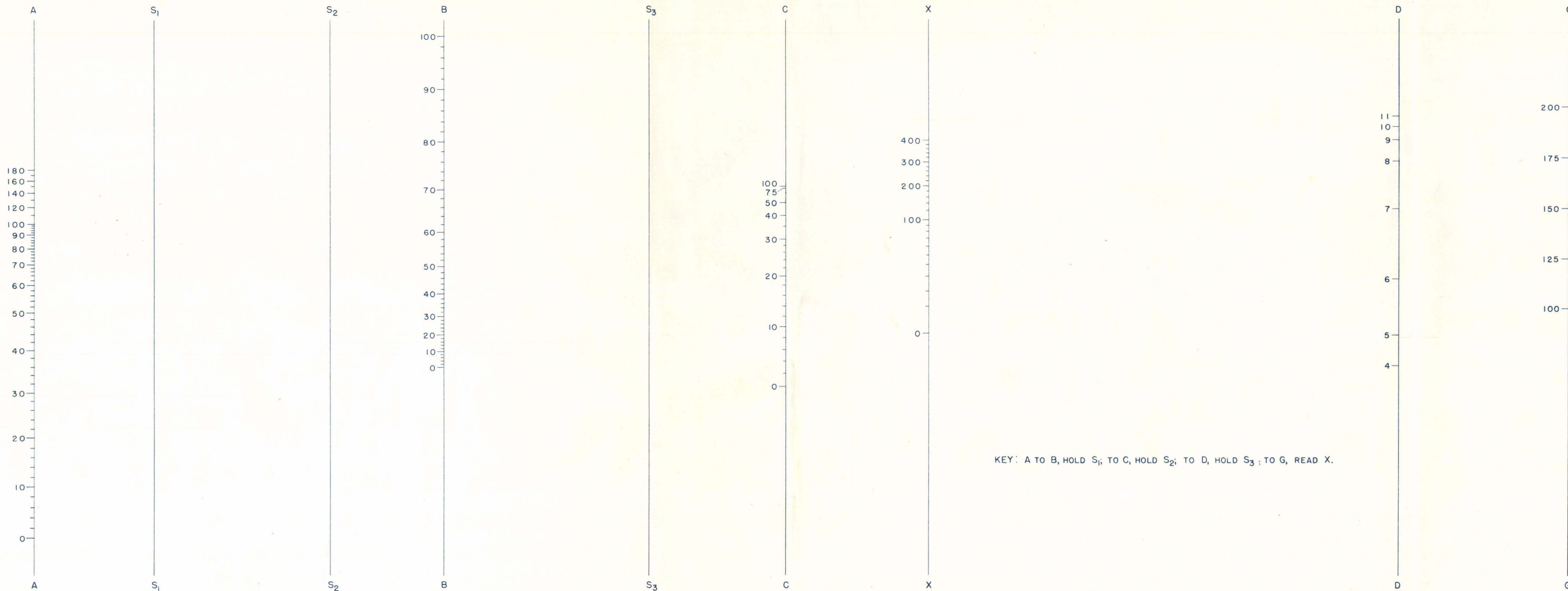


CHART FOR ESTIMATION OF GROWTH  
IN SELECTION FORESTS OF THE SIERRA NEVADA  
TREES GROWING INTO THE STAND 11.6 INCHES DBH AND OVER  
BOARD FEET 1939 SCRIBNER RULE

PREPARED BY V. A. CLEMENTS  
DIVISION OF FOREST MANAGEMENT  
RS  
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Stand Studies  
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VOLUME PER ACRE  
BOARD FEET

SITE INDEX  
FEET

PERCENT OF VOLUME  
IN WHITE FIR

AVERAGE ANNUAL  
LOSS PER ACRE  
BOARD FEET

PERCENT OF VOLUME  
IN TREE CLASSES 4,5,6, & 7.

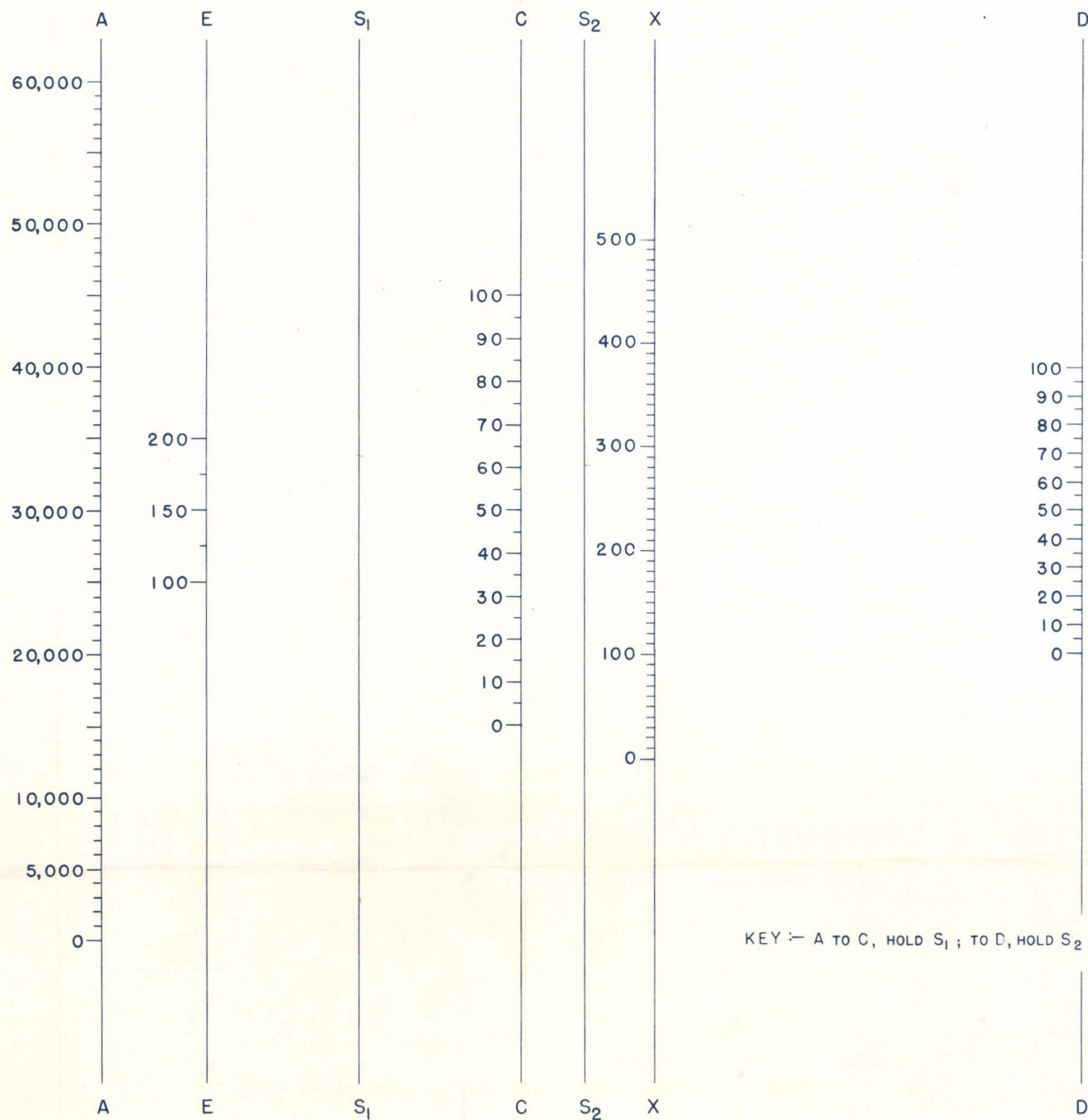


CHART FOR ESTIMATION OF LOSS  
IN SELECTION FORESTS OF THE SIERRA NEVADA  
STAND 11.6 INCHES DBH AND OVER  
BOARD FEET 1939 SCRIBNER RULE

PREPARED BY V. A. CLEMENTS

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